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# NASA Procedural Requirements

NPR 8715.1

Effective Date: August 09, 1999 Expiration Date: September 30,

## **COMPLIANCE IS MANDATORY**

## NASA Occupational Safety and Health Programs w/Change 3 (02/13/06)

Responsible Office: Office of Safety and Mission Assurance

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## **Change History**

## NPR 8715.1, NASA Occupational Safety and Health Programs

Chg#	Code/Center	Approved	Description/Comments
1	Q	1	Administrative update to clarify the reporting protocol for unsafe conditions. Deletions of paragraph, references, etc, per Jennings memo dated 12/5/03 and administrative changes made throughout to change NPG to NPR.
2	Q		Deletions of paragraph, references, etc, per Jennings memo dated 12/5/03 and administrative changes made throughout to change NPG to NPR
3	OSMA	03/15/06	Revalidation with administrative corrections.

Effective Date: August 9, 1999

#### **Preface**

## P.1 PURPOSE

This NPR provides the requirements for NASA's Federal civil service occupational safety and health programs as required by Section 19 of the Occupational Safety and Health Act of 1970, as amended (29 U.S.C. 668), Executive Order 12196, and the implementing regulations found in 29 CFR Part 1960. This document is to be used in conjunction with 29 CFR Part 1960 and P.4 references below.

## P.2 APPLICABILITY

This NPR is applicable to NASA Headquarters and NASA Centers, including Component Facilities and international operations where NASA employees are located. The requirements in the document apply to the following: (1) all NASA organizations, elements, entities, or individuals; (2) all NASA equipment, property, systems, and facilities; and (3) all phases of the life cycle of systems or facilities.

## **P.3 AUTHORITY**

- a. 42 U.S.C.§ 2473, (c)(1), Section 203(c)(1) of the National Aeronautics and Space Act of 1958, as amended.
- b. 29 U.S.C. 668, Section 19 of the Occupational Safety and Health Act of 1970, as amended.
- c. EO 12196, Occupational Safety and Health Programs for Federal Employees, dated February 26, 1980, as amended.
- d. 29 CFR Part 1960, Basic Program Elements for Federal Employees, Occupational Safety and Health Programs and Related Matters.
- e. NPD 8710.2, NASA Safety and Health Program Policy.

#### P.4 REFERENCES

- a. 5 U.S.C. 552a, Privacy Act of 1974, as amended.
- b. NPD 1000.3, "NASA Organization."
- c. NPD 1440.6, "NASA Records Management."
- d. NPD 1800.2, "NASA Occupational Health Program."
- e. NPD 1810.2, "NASA Occupational Medicine Program."
- f. NPD 1820.1, "NASA Environmental Health Program."
- g. NPD 8070.6, "Technical Standards."
- h. NPD 8700.1, "NASA Policy for Safety and Mission Success."
- i. NPR 1441.1, "NASA Records Retention Schedules."
- j. NPR 8621.1, "NASA Procedural Requirements for Mishap Reporting, Investigating, and Recordkeeping."
- k. NPR 8715.3, "NASA Safety Manual."

- 1. NPR 8735.1, "Procedures For Exchanging Parts, Materials, and Safety Problem Data Utilizing the Government-Industry Data Exchange Program and NASA Advisories."
- m. NASA STD 8719.7, Facility System Safety Guidebook.
- n. NASA-STD-8719.8, Expendable Launch Vehicle Payload Safety Review Process Standard.
- o. NASA-STD-8719.9, Standard for Lifting Devices and Equipment.
- p. NASA-STD-8719.9, Appendix A, NASA Alternate Standard for Suspended Load Operations.
- q. NASA-STD-8719.11, Safety Standard for Fire Protection.
- r. NASA-STD-8719.13, Software Safety Standard.
- s. NSS/WS-1740.10, NASA Safety Standard for Underwater Facility and Non-Open Water Operations.
- t. NSS 1740.12, Safety Standard for Explosives, Propellants, and Pyrotechnics.
- u. NSS 1740.14, Guidelines and Assessment Procedures for Limiting Orbital Debris.

### P.5 CANCELLATION

NHB 2710.1, dated August 1982, NASA Safety and Health Handbook Occupational Safety and Health Programs.

/s/ Frederick D. Gregory Associate Administrator for Safety and Mission Assurance

Designated Agency Safety and Health Official Concurrence

## **CHAPTER 1. General**

## 1.1 Scope

- 1.1.1 The Occupational Safety and Health Act of 1970, as amended (the Act), 29 U.S.C. 651 et.seq., became effective April 28, 1971. The Act requires the development and enforcement of standards to ensure safe and healthful working conditions for employees in the private sector and contains provisions applying to Federal agencies and their employees. Section 19 of the Act requires Federal agencies to have a comprehensive occupational safety and health program consistent with the standards authorized by Section 6 of the Act, except where the Secretary of Labor (the Secretary) approves compliance with alternative standards. When an agency head determines it necessary to apply a different standard, that agency head shall, after consultation with appropriate occupational safety and health committees where established, notify the Secretary and provide justification that equivalent or greater protection will be assured by the alternate standard (Requirement 22081).
- 1.1.2 Executive Order (E.O.) 12196 was promulgated on February 26, 1980. It directs Federal agencies to implement effective occupational safety and health programs, provides for the evaluation of Federal agency programs by the Department of Labor (DOL), and provides for the transmittal of these evaluations to the President. It also authorizes DOL to issue program guidelines to assist Federal agencies in establishing and operating their programs with sufficient flexibility consistent with their respective mission, size, and organization.
- 1.1.3 Basic elements for Federal employee occupational safety and health programs are published in 29 CFR Part 1960. Federal agencies are required to observe these program guidelines (Requirement 22083).
- 1.1.4 Overall policy and responsibilities for safety and health within NASA are described in NPD 8710.2, "NASA Safety and Health Program Policy." The purpose of this NPR is to provide details necessary to implement occupational safety and health regulations found in 29 CFR Part 1960.

#### 1.2 Definitions and Terms

The following definitions and terms apply to this document:

- 1.2.1 "Contracting Officer" is a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings.
- 1.2.2. "The Designated Agency Safety and Health Official" (DASHO) is the individual who is responsible for the management of the safety and health program within an agency, and is so designated or appointed by the head of the agency pursuant to 29 CFR 1960.6 and the provisions of E.O. 12196. The NASA DASHO is the Chief Health and Medical Officer.
- 1.2.3 "Federal Occupational Safety and Health Administration (OSHA) Official" is an investigator, evaluator, or compliance officer employed by, assigned to, or under contract to OSHA.
- 1.2.4 "Imminent Danger" means any conduct or operations in any workplace which are such that a danger exists which would reasonably be expected to cause death or serious physical harm immediately or before the imminence of such danger can be eliminated through normal procedures.
- 1.2.5 "Inspection" means a comprehensive survey of all or part of a workplace by qualified personnel in order to detect safety and/or health hazards. Inspections are normally performed during the regular work hours of the Agency, except as special circumstances may require. Inspections do not include routine workplace surveillance of occupational health conditions.
- 1.2.6 "NASA Employees" are Federal civil servants employed and paid by NASA, or on detail from other Federal agencies.
- 1.2.7 "Recordable Occupational Injuries or Illnesses," See NPR 8621.1 for definitions and policies relating to NASA mishap and close call reporting, investigating, and recordkeeping.

- 1.2.8 "Safety and Health Inspector" means a safety and/or occupational health specialist or other trained person authorized to carry out inspections with the equipment and competence to recognize safety and/or health hazards in the workplace.
- 1.2.9 In addition to the 29 CFR 1960.2 series of qualified Safety and Health Specialists, NASA has determined that a person or persons meeting the Office of Personnel Management standards for the following occupations are also qualified health specialists:
- 1.2.9.1 General Health Scientist GS-601
- 1.2.9.2 Physician's Assistant GS-603
- 1.2.9.3 Sanitarian GS-688
- 1.2.10 "Serious" as used in "serious hazard," "serious violation," or "serious condition" means a hazard, violation, or condition such that there is a substantial probability that death or serious physical harm could result.
- 1.2.11 "NASA Standards for Occupational Safety and Health" or standards adopted by NASA (in accordance with NPD 8070.6, "Technical Standards") prescribe conditions and methods necessary to provide a safe and healthful working environment. These standards are either developed internally by NASA or adopted from other sources.
- 1.2.12 "State OSHA Official" is an investigator or compliance officer employed by a state which has an OSHA-approved occupational safety and health plan.
- 1.2.13 "Supervisor in Charge of the Establishment" (workplace) as used in Chapter 4 of this NPR means the building manager, building operator, facility manager, facility operations manager facility engineering head, or other designated official who normally initiates requests for repairs or maintenance for a particular building, facility, or area within a facility.

# **CHAPTER 2. Safety and Health Administration**

## 2.1 Senior Management Responsibilities

- 2.1.1 The NASA Administrator is the senior person responsible for Agencywide safety and health. (Requirement 22003).
- 2.1.2 OSHA requires that each agency head designate an official with sufficient authority and responsibility to represent effectively the interest and support the agency head in the management and administration of the agency occupational safety and health program (Requirement 22004). The current Designated Agency Safety and Health Official (DASHO) for NASA is the Chief Health and Medical Officer. The DASHO holds responsibility for assuring that all OSHA regulatory requirements at the Agency level are fulfilled or implemented (Requirement 31542). The DASHO is responsible for assuring that safety and health officials are appointed at appropriate levels with adequate budgets and staffs to implement occupational safety and health programs at all operational levels as required by 29 CFR Part 1960.6, paragraph (c) (Requirement 31775).
- 2.1.3 The safety and health functions at NASA are administered by two separate functional offices. The safety function is managed by the Office of Safety and Mission Assurance and the health function is managed by the Office of the Chief Health and Medical Officer. The DASHO and the Chief Safety and Mission Assurance Officer, as members of the NASA Operations Management Council, provide for senior management involvement and oversight of NASA's Occupational Safety and Health Program.

### 2.2 Management Implementation Responsibilities

- 2.2.1 NASA Center Directors and the Assistant Administrator for Infrastructure and Administration have the responsibility to ensure that the NASA occupational health and safety programs are effectively implemented and operated at their Centers and Component Facilities (Requirement 22156).
- 2.2.2 Other Officials-in-Charge of Headquarters Offices shall ensure that their organizations support the NASA Occupational Health and Safety Program (Requirement 22006).

### 2.3 Supervisor Responsibilities

- 2.3.1 Supervisors are responsible for ensuring a safe and healthful workplace (Requirement 22007). This responsibility extends to any place where their employee(s) is engaged in work related to his/her job including international and extraterrestrial locations. Responsibilities include:
- 2.3.1.1 Furnishing a safe and healthful place of employment and ensuring that identified hazards are eliminated or controlled through a rigorous proactive inspection and abatement process (Requirement 22090). Assuring that a safe and healthful workplace is maintained through active coordination with and support to the designated facility operations manager (Requirement 31543).
- 2.3.1.2 Ensuring that employees are informed of NASA safety and health programs and of the protection afforded employees through these programs (Requirement 22091).
- 2.3.1.3 Informing employees of the location of the nearest medical treatment facility, procedures for obtaining treatment, and methods for reporting occupational injuries or illnesses (Requirement 22092).
- 2.3.1.4 Instructing employees to report hazardous conditions to their immediate supervisor or to their Center or Component Facility safety and health official (Requirement 22093).
- 2.3.1.5 Taking appropriate action to protect employees in imminent danger situations (Requirement 22094).
- 2.3.1.6 Informing employees of specific hazards associated with their workplace and duties and ensuring use of

appropriate personal protective equipment (Requirement 22095).

- 2.3.1.7 Ensuring that NASA employees are provided safety and health training as applicable to the work environment (see paragraph 2.5.2.6) (Requirement 22008). Ensuring that employees are informed of their specific responsibilities and rights under the Act, Executive Order l2l96, and 29 CFR Part 1960, and how they may participate in the safety and health program (Requirement 31544).
- 2.3.1.8 Cooperating with and assisting safety and health personnel while they are performing their duties as specified in the NASA Occupational Safety and Health program (Requirement 22097).
- 2.3.1.9 Ensuring timely reporting of mishaps and close calls and timely follow up of any corrective actions (Requirement 22098).

## 2.4 Employee Responsibilities

Employees are responsible for the following:

- 2.4.1 Complying with safety and health standards, rules, and regulations issued by NASA, Federal, State, and local authorities (Requirement 22100).
- 2.4.2 Using established procedures to report suspected safety or health hazards (Requirement 22101).
- 2.4.3 Promptly obtaining necessary emergency medical care as the result of an occupational injury or illness (Requirement 22102).
- 2.4.4 Promptly reporting occupational injuries, illnesses, mishaps, and close calls in accordance with established procedures (Requirement 22103).
- 2.4.5 Cooperating with safety and health personnel during inspections, surveys, and investigations (Requirement 22104).
- 2.4.6 Utilizing protective equipment when prescribed and/or required by safety or health standards, good work practices, or when directed by supervisors (Requirement 22105).

#### 2.5 Employee Access to Information and Participation in the Safety and Health Program

- 2.5.1. Employees or their designated representatives shall be given the following information with regard to NASA occupational safety and health programs:
- 2.5.1.1 Access to documents describing NASA's occupational safety and health programs including the Act, applicable Executive Orders, Federal, State, and local regulations, and standards (Requirement 22107).
- 2.5.1.2. Access to the log and summary of occupational injuries and illnesses, including OSHA Form 300A or its equivalent, subject to the Privacy Act of 1974, as amended, 5 U.SC. 552a (Requirement 22108).
- 2.5.1.3. Access to proposed NASA occupational safety and health standards and encouragement to provide comments to their appropriate representatives or committees (Requirement 22109).
- 2.5.1.4. Access to inspection reports, job hazard analyses of the work site, associated job safety and health documentation, and accident investigations (Requirement 22110).
- 2.5.2. Employees shall be furnished the following:
- 2.5.2.1. NASA-sponsored medical examinations at no cost when the Center or Component Facility occupational health or safety representative identifies significant exposure or significant potential for exposure to a chemical, physical, or biological agent in the work environment (Requirement 22111).
- 2.5.2.2. Safety and health training, appropriate for the degree of hazard associated with their occupation or workplace (Requirement 22112).
- 2.5.3. Employees shall be represented on Center or Component Facility safety and health committees or their subcommittees (Requirement 22011).
- 2.5.4. Employees are empowered to cease any process or operation they believe is unsafe and request analysis by a qualified individual. The qualified individual will determine the corrective actions needed (if any) and when the process or operation may be resumed.

- 2.5.5. Employees have the right to report unsafe and unhealthful working conditions to appropriate officials.
- 2.5.6. Employees shall be authorized official time to participate in the Agency safety and health programs and in the activities provided for in Section 19 of the Act, Executive Order 12196, and 29 CFR 1960 (Requirement 22013).

## 2.6 Dissemination of Program Information

- 2.6.1 Employees must be made aware of the Center or Component Facility safety and health programs (Requirement 22014). Copies of Executive Order 12196, 29 CFR Part 1960, details of NASA's Occupational Safety and Health programs, and applicable safety and health standards shall be made available, upon request, to employees or employee representatives for review (Requirement 31545).
- 2.6.2 A copy of the Center or Component Facility written safety and health program information shall be made available to each supervisor, safety and health committee member, and employee representatives (Requirement 22015).
- 2.6.3 The Center or Component Facility safety and health official(s) shall assure that a poster (NASA Form 1613, "NASA Occupational Safety and Health Protection For Federal Employees") is conspicuously posted in each major facility informing employees of the provisions of the Act, Executive Order 12196, and NASA's Occupational Safety and Health programs (Requirement 22016). Individual NASA Centers or Component Facilities shall augment such posters with site specific information, which includes the following:
- 2.6.3.1 Details of the Center or Component Facility procedure for responding to employee reports of potential unsafe or unhealthful conditions (Requirement 31546).
- 2.6.3.2 Details of NASA's procedure for filing allegations of discrimination or reprisal for participating in the safety or health program or for reporting potential unsafe or unhealthful conditions (Requirement 31547).
- 2.6.3.3 Locations where employees may obtain information regarding the Center or Component Facility safety and health programs (Requirement 31548).
- 2.6.3.4 Relevant information about the Center's safety and health committee (Requirement 31549).
- 2.6.4 An annual summary of occupational injuries and illnesses shall be posted no later than 45 calendar days after the close of the fiscal year or otherwise disseminated in written form to all employees of the workplace (Requirement 22017).

## 2.7 Freedom From Reprisal

No employee shall be subject to restraint, interference, coercion, discrimination, or reprisal for filing a report of an unsafe or unhealthful working condition, participation in the activities of the Agency's occupational safety and health programs, or the exercise of any right or privilege afforded by Section 19 of the Act, Executive Order 12196, or 29 CFR Part 1960 (Requirement 22018).

#### 2.8 Resolution of Complaints

- 2.8.1 Where an employee has made a report of a suspected unsafe or unhealthful condition to his/her supervisor and is dissatisfied with the abatement action taken, the following appeal route (in order of preference) is available:
- 2.8.1.1 Center or Component Facility Safety/Health Official(s), as appropriate.
- 2.8.1.2 Center Director or Manager.
- 2.8.1.3 Designated Agency Safety and Health Official (for unhealthful conditions)/Chief Safety and Mission Assurance Officer (for unsafe conditions).
- 2.8.1.4 NASA Safety Reporting System (NSRS).
- 2.8.1.5 Office of Federal Agency Safety and Health Programs OSHA/DOL.
- 2.8.2 Complaints or grievances may also be registered through the NASA grievance procedures, through those procedures contained in agreements negotiated with recognized labor organizations, or through the NASA Office of Inspector General.

## 2.9 Financial Management

2.9.1 Pursuant to 29 CFR 1960.7, NASA ensures that Agency budget submissions include appropriate financial and other resources to effectively implement and administer NASA's occupational safety and health programs. It generally

states that appropriate resources for an agency's occupational safety and health program shall include sufficient personnel, abatement of unsafe or unhealthful working conditions, safety and health equipment, contracts to identify or evaluate unsafe working conditions, promotional costs, technical information, medical surveillance programs, and safety and health training.

- 2.9.2 Compliance with many of the financial requirements can best be achieved at the NASA Center level through a cooperative effort between the safety/health organizations and the financial management organizations. Specific needs relating to their operational budget will have to be identified by the safety and health office(s) and be conveyed in a timely and effective manner to ensure inclusion in the annual budget submission. The role of NASA Headquarters is to assist the NASA Centers in identifying potential problem areas and to work with the safety/health organizations to develop solutions which will facilitate the accomplishment of the goals.
- 2.9.3 Prior to the annual budget call, the NASA Center or Component Facility safety and health official(s) will be responsible for compiling the dollar estimates for the following categories, where appropriate:
- 2.9.3.1 Personnel staffing levels.
- 2.9.3.1.1 Safety
- 2.9.3.1.1 Health
- 2.9.3.2 Training, including travel funds necessary for training.
- 2.9.3.3 Sampling, testing, diagnostic and analytical tools and equipment, and laboratory analyses.
- 2.9.3.4 Program promotional costs such as publications, posters, or films.
- 2.9.3.5 Technical information, documents, books, standards, codes, periodicals, and publications.
- 2.9.3.6 Firefighting equipment, including vehicles.
- 2.9.3.7 Occupational health surveillance programs for employees.
- 2.9.3.8 Contracts to identify or evaluate unsafe or unhealthful working conditions.
- 2.9.4 In those instances where the safety and health office(s) does not have specific budget authority, it will be necessary to work with those operational entities that formulate the budget estimates in order to compile these data.
- 2.9.5 Abatement of unsafe and unhealthful conditions is the primary responsibility of the Center Directors with assistance provided by the Center or Component Facility Safety and Health Office(s) (Requirement 22120). In the event the Center or Component Facility funding is inadequate to address and abate the hazard, it is the responsibility of the Associate Administrator to resolve any funding issue (Requirement 31550).
- 2.9.6 The safety and health inspections required by Subpart D, 29 CFR Part 1960, coupled with action in response to safety complaints and reports of deficiencies are intended to identify conditions requiring corrective action. Cost estimates are required for all projects (Requirement 22024). In addition, the appropriate fund source type and a justification for action must be given (Requirement 31551).
- 2.9.7 Special health and safety training budgets will be established based on the identified and projected needs of the Centers and Office of Infrastructure and Administration and disbursed in accordance with guidelines and priorities established by the Agency safety and health training managers (see paragraph 6.4).

## 2.10 Product Safety

- 2.10.1 The requirements of 29 CFR 1960.34(b)(6) for product safety will be followed whenever the Center or Component Facility designs, produces, or otherwise provides a product as an end item. Special emphasis will be given to locally designed/fabricated items.
- 2.10.2 To ensure such compliance, Centers or Component Facilities shall:
- 2.10.2.1 Provide Material Safety Data Sheets (MSDS) for hazardous materials which meet the content requirements of 29 CFR 1910.1200 (Requirement 22027).
- 2.10.2.2 Meet requirements for system safety as outlined in NPR 8715.3, "NASA Safety Manual," for major hardware and software product development.
- 2.10.3 See NPR 8735.1 "Procedures For Exchanging Parts, Materials, and Safety Problem Data Utilizing the

Government-Industry Data Exchange Program and NASA Advisories," for responsibilities for participation in the Government-Industry Data Exchange Program (GIDEP).

## **CHAPTER 3. Standards**

#### 3.1 Compliance With OSHA and NASA Standards

- 3.1.1 NASA will comply with safety and health standards promulgated under Section 6 of the Act, except where alternate/supplemental standards have been approved by the Secretary of Labor and NASA Headquarters (Requirement 22123).
- 3.1.2 Approval for variances from OSHA standards may be obtained by submitting proposed alternate or supplementary standards to the DASHO for coordination and approval by the Secretary of Labor. Alternate or supplemental standards will normally be adopted as NASA-wide standards. (Examples include the alternate NASA Crane Safety Standard and the supplemental Explosives Safety Standard.)
- 3.1.3 Approval for variances from NASA standards will be accomplished per variance requirements in NPR 8715.3, "NASA Safety Manual." Nonconformances with unique NASA-developed standards for which there are no OSHA standards will only require approval within NASA.

#### 3.2 Alternate Standards

- 3.2.1 NASA may develop unique alternate safety and health standards provided such standards are approved in accordance with 29 CFR Part 1960.17. The DASHO (or designee) will serve as the Headquarters coordinator for review of alternate standards and will prepare necessary material for interagency review with the DOL. Requests for alternate standards will be coordinated with employees or their representatives and will not be approved unless the alternate standard provides equivalent or greater protection for affected employees.
- 3.2.2 In developing and submitting alternate standards, NASA shall provide the following information:
- 3.2.2.1 A statement of why NASA cannot comply with the OSHA standard or wants to adopt an alternate standard (Requirement 31552).
- 3.2.2.2 The proposed alternate standard (Requirement 31553).
- 3.2.2.3 An explanation of how the alternate standard provides equivalent or greater protection for the affected employees (Requirement 31554).
- 3.2.2.4 A description of interim protective measures employed pending approval of the standard (Requirement 31555).
- 3.2.2.5 A written summary of comments, if any, from interested employees, their representatives, or the applicable safety and health committee (Requirement 31556).

### 3.3 Supplementary Standards

- 3.3.1 NASA may develop unique supplementary safety and health standards, when no OSHA standard or Voluntary Consensus Standard exists, provided such standards are approved in accordance with 29 CFR Part 1960.18. When a standard will be applicable NASA-wide, the standard will be issued as a NASA safety or health standard. The NASA organization proposing the supplementary standard will act as the lead in developing the standard. The DASHO (or designee) will coordinate Agencywide and interagency reviews and approval, and may publish the standard in its final form.
- 3.3.2 In developing and submitting supplemental standards, NASA shall provide the following information:
- 3.3.2.1 A statement of why NASA requires the development of the supplemental standard (Requirement 31557).
- 3.3.2.2 The proposed supplemental standard (Requirement 31558).
- 3.3.2.3 An explanation of how the supplemental standard provides protection for the affected employees (Requirement

#### 31559).

- 3.3.2.4 A description of interim protective measures employed pending approval of the standard (Requirement 31560).
- 3.3.2.5 A written summary of comments, if any, from interested employees, their representatives, or the applicable safety and health committee (Requirement 31561).

## 3.4 NASA-Originated Standards

Unique NASA operations, materials, facilities, equipment, procedures, and practices may require establishment of supplementary safety and health standards. The following are NASA-originated standards:

- a. NASA STD 8719.7, Facility System Safety Guidebook.
- b. NASA-STD-8719.8, Expendable Launch Vehicle Payload Safety Review Process Standard.
- c. NASA-STD-8719.9, Standard for Lifting Devices and Equipment.
- d. NASA-STD-8719.11, Safety Standard for Fire Protection
- e. NASA-STD-8719.13, Software Safety Standard.
- f. NSS/WS-1740.10, NASA Safety Standard for Underwater Facility and Non-Open Water Operations.
- g. NSS 1740.12, Safety Standard for Explosives, Propellants, and Pyrotechnics.
- h. NSS 1740.14, Guidelines and Assessment Procedures for Limiting Orbital Debris.

## 3.5 NASA Alternate/Supplemental Standards

- a. NASA-STD-8719.9, Appendix A, Alternate Standard for Suspended Load Operations.
- b. NSS 1740.12, Safety Standard for Explosives, Propellants, and Pyrotechnics (approved by OSHA for use as a supplemented standard).

#### 3.6 NASA Procurements

When it is determined by the Center or program official approving the procurement request, in conjunction with the Center or Component Facility safety and/or health office(s), that NASA safety and/or health standards are required in statements of work, solicitations, and contracts, such standards will be identified and cited for all places where NASA employees work (Requirement 22160).

### 3.7 Distribution and Availability of NASA Standards

3.7.1 NASA Safety and Mission Assurance Standards and NASA Health Standards will be available through the NASA Technical Standards Program at http://standards.nasa.gov.

# **CHAPTER 4. Inspection and Abatement**

### 4.1 Frequency of Inspection

- 4.1.1 NASA Centers or Component Facilities will establish a formal schedule of inspections for all operations/facilities. All active areas and operations of each establishment shall be inspected at least annually (Requirement 22037). More frequent inspections shall be conducted in all establishments where there is an increased risk of accident, injury, or illness due to the nature of the workplace (Requirement 31562).
- 4.1.2 Any facility, structure, operation, vehicle, or equipment that is in an inactive status must be inspected at least annually (Requirement 22038). Prior to reactivation, the facility, structure, vehicle, operation, or equipment shall undergo a thorough inspection to identify potential hazards (Requirement 31563).
- 4.1.3 Sufficient unannounced inspections and unannounced follow-up inspections shall be conducted to ensure the identification and abatement of hazardous conditions (Requirement 22039).
- 4.1.4 Special inspections may be conducted at the request of safety and health committees, employees or their representatives, or upon notice of an unsafe or unhealthful condition.

## 4.2 Qualifications of Inspectors

- 4.2.1 Qualified inspectors shall conduct inspections (Requirement 22041).
- 4.2.2 Safety and health specialists must meet the qualifications as defined in 29 CFR 1960.2 and paragraph 1.2.9 of this NPR (Requirement 22042). The Center or Component Facility safety and/or health official(s) shall be responsible for the determination and certification of qualified personnel including those stated in paragraph 1.2.9 of this NPR (Requirement 31564).
- 4.2.3 Inspectors shall have sufficient documented training and experience in safety and health necessary for the recognition, evaluation, and general abatement of suggestions/procedures of health and safety hazards (Requirement 22043).

#### 4.3 Conduct of Inspections

- 4.3.1 Inspections will be conducted in accordance with 29 CFR 1960.26.
- 4.3.2 The supervisor in charge of the establishment, or a person empowered to act for that official, shall undertake immediate abatement, or cease operations and withdraw exposed personnel who are not necessary for abating an imminent danger condition (Requirement 22045). In the event the supervisor in charge of the establishment needs assistance to undertake full abatement, that official shall promptly contact the responsible Center officials, who shall assist in the abatement effort (Requirement 31565).
- 4.3.3 Inspection personnel shall be provided the proper support equipment necessary to conduct a thorough inspection of the establishment involved (Requirement 22046).

#### 4.4 Employee Reports of Alleged Unsafe or Unhealthful Conditions

- 4.4.1 Employees are encouraged to report alleged unsafe or unhealthful conditions to the Center or Component Facility safety and/or health official(s). Upon request of the employee, his or her name shall not be disclosed except to the safety and/or health official(s) in connection with the report of a suspected unsafe or unhealthful condition (Requirement 22048).
- 4.4.2 All written reports and imminent danger oral reports of unsafe or unhealthful conditions will be recorded as received by the Center or Component Facility safety and/or health official(s) and a file maintained as to the disposition. (Electronic versions are acceptable for recordkeeping purposes.) As a minimum the file shall contain the following:

- a. Date and time received (Requirement 31566).
- b. File number assigned (Requirement 31567).
- c. Location of condition (Requirement 31568).
- d. Description of condition reported (Requirement 31569).
- e. Hazard Classification (Requirement 31570).
- f. Action taken (Requirement 31571).

## 4.5 Notice of Unsafe or Unhealthful Conditions

- 4.5.1 Notice of Unsafe or Unhealthful Condition (NF 1390) or equivalent (any equivalent form must be approved by the DASHO or designee), hereinafter referred to as the notice (See Appendix A for sample), shall be issued not later than 15 days after completion of the inspection for safety violations or not later than 30 days for health violations (Requirement 22050). If the notice cannot be issued within the prescribed time period, reasons for the delay must be documented (Requirement 31572). The hazard notice will be posted if deemed necessary by the local safety and/or health official(s).
- 4.5.2 The notice shall be sent to the supervisor in charge of the establishment for correction (and posting if directed by the safety or health office) (Requirement 22051). Local safety and health office(s) will establish closed-loop procedures to ensure necessary follow-up and correction.
- 4.5.3 The supervisor in charge of the establishment shall ensure that a copy of the notice is filed and retained for a period of 5 years after abatement and made available to OSHA or NIOSH officials upon request (Requirement 22052). (Electronic versions are acceptable for recordkeeping purposes.)
- 4.5.4 The notice shall indicate the risk assessment for the condition described (Requirement 22053). A risk assessment process should be used to analyze and status overall risk potential. The risk assessment/analysis must be accomplished using two elements: Severity and Probability. (Requirement 31573).

#### 4.6 Abatement of Unsafe or Unhealthful Conditions

- 4.6.1 In response to reports of suspected unsafe or unhealthful conditions, Center or Component Facility safety and/or health official(s), as appropriate, shall conduct inspections as soon as possible but no later than indicated in the following timeframes:
- 4.6.1.1 For reported imminent danger conditions, immediate notification to their supervisor will be made and employees removed from exposure to the alleged imminent danger condition until an inspection has been made (within 24 hours as required by 29 CFR 1960) (Requirement 31575).
- 4.6.1.2 Serious conditions 3 working days (Requirement 31576).
- 4.6.1.3 Less than serious conditions (all others) 20 working days (Requirement 31577).
- 4.6.2 Where unsafe or unhealthful conditions are abated immediately upon discovery, the notice shall be noted to that affect and be filed and maintained in accordance with paragraph 4.5 of this NPR (Requirement 22055).
- 4.6.3 Where conditions will be abated within 30 calendar days, the notice will so indicate (Requirement 22056).
- 4.6.4 Where conditions will require more than 30 calendar days to abate, the supervisor in charge of the establishment shall promptly prepare an abatement plan with the appropriate consultation of the establishment's safety and/or health official(s) (Requirement 22057). The NASA Safety and Health Hazard Abatement Form (NF 1584), or equivalent (any equivalent form must be approved by the DASHO or designee), may be used by NASA Centers or Component Facilities for this purpose. The plan shall contain an explanation of the circumstances of the delay in abatement, a proposed timetable for the abatement, and a summary of steps being taken in the interim to protect employees from being adversely exposed to the unsafe or unhealthful working condition (Requirement 31578). A copy of the plan shall be sent to the Center safety and health committee and to representatives of the employees (Requirement 31579). Any changes in an abatement plan will require the preparation of a new plan in accordance with the provisions of this paragraph (Requirement 31580). A copy of each abatement plan will be maintained by each Center or Component Facility safety office or occupational health office, whichever is appropriate, for review during program evaluations. A summary of all open abatement plans and a listing of those closed during the reporting period will also be provided to the DASHO or designee as part of the input to the annual report. (See Chapter 7.)

- 4.6.5 When a hazard cannot be abated with the authority and resources of the supervisor in charge of the establishment, that official shall request assistance from the Center Director (Requirement 22058). The local safety/health official, any established committee and/or employee representatives, and all personnel subject to the hazard shall be advised of this action and of interim protective measures in effect and shall be kept informed of subsequent progress on the abatement plan (Requirement 31582). The NASA Safety and Health Hazard Abatement Form (NF 1584), or equivalent (any equivalent form must be approved by the DASHO or designee), will be used for all hazards requiring resource assistance from Headquarters, and a copy will be forwarded to the DASHO. (See Appendix B for sample.)
- 4.6.6 When a hazard in leased space cannot be abated without assistance of the General Services Administration (GSA) or other lessor Federal agency, the Center or Component Facility shall notify such agency (Requirement 22059). If the hazard cannot be abated in a timely fashion and requires an abatement plan per paragraph 4.6.4, copies of the abatement plan and associated correspondence will be provided to the DASHO.
- 4.6.7 For those deficiencies that can be rectified within 30 days, written notification by the supervisor in charge of the establishment indicating the corrective action and associated cost, along with verification of proper abatement by the safety and health office(s), is required (Requirement 22060). (Use NASA Form 1390, "Notice of Unsafe or Unhealthful Conditions," or equivalent (any equivalent form must be approved by the DASHO or designee).)

## 4.7 Access for OSHA and NIOSH representatives

Official representatives of OSHA and the National Institute of Occupational Safety and Health (NIOSH) are authorized to enter NASA establishments for purposes of inspection and/or evaluation of conditions therein. The NASA DASHO or designee must be notified immediately of any OSHA inspection or visit (Requirement 22061). Access to security controlled areas will be coordinated with the Center security officer. Such representatives shall be required to present appropriate identification, receive necessary security clearance, and be escorted during their visits (Requirement 31584). OSHA and NIOSH representatives shall, upon request, be provided available safety and health information on the Center or Component Facility to be visited (Requirement 31585). Upon request, they should also be provided photographic support, if available. Arrangements shall be made for such officials to interview and be accompanied by employees or representatives of employees during their visit (Requirement 31586). Within 10 working days following written notification of findings of an inspection by OSHA or an evaluation by NIOSH, NASA Centers or Component Facilities will provide a summary of any findings and corrective action necessary to the DASHO.

## 4.8 Accident Investigation

- 4.8.1 Details on accident investigation policy and procedures are found in NPR 8621.1 "NASA Procedural Requirements for Mishap Reporting, Investigating, and Recordkeeping."
- 4.8.2 Any information or evidence uncovered during accident investigations which would be of benefit in developing a new OSHA standard or in modifying or revoking an existing standard should be promptly transmitted to the Secretary of OSHA.

## **CHAPTER 5. Councils and Committees**

#### 5.1 General

Under provisions of the Basic Program Elements for Federal Employee Occupational Safety and Health Programs (29 CFR, Part 1960), agencies are given certain options regarding the use of safety and health committees. NASA has chosen not to implement committees certifiable under these regulations; however, NASA will continue to require the basic safety and health committee concept for Centers as outlined in paragraph 5.3 and 5.4 below.

## 5.2 Participation in the NASA Operations Management Council

The DASHO is a member of the NASA Operations Management Council in order to ensure top level management support. A voice in this forum is provided in order for the Agency to meet its externally mandated safety and health requirements, and to ensure uniform, basic, quality health and safety services for NASA employees. The NASA Operations Management Council serves as the broad forum for reviewing all Agency policy, practices, and issues impacting NASA operations and the safety, health and well-being of its employees.

## 5.3 Center Executive Safety and Health Board or Equivalent

This committee will be established at each Center. The NASA Center Director or a designee will be the chairperson. Meetings will be scheduled at least semiannually and more often where conditions indicate a need. The purpose of this committee is to provide a forum for meaningful discussion of, and a channel for input to, management's decisions relative to occupational safety and health matters. For these reasons, membership should be broad based and will include representatives of both management and employees. Safety and health, as well as other technical personnel, should be either full members or advisors to the committee and should attend meetings. Agendas shall be prepared in advance and minutes kept and distributed to participants (Requirement 22065). Each committee recommendation shall receive a formal response from management, within 30 days of receipt, as to the disposition of the recommendations and be incorporated in the minutes of subsequent meetings (Requirement 31587). Copies of minutes shall be kept on file for review by Headquarters safety and health offices (Requirement 31588).

#### 5.4 Subordinate Safety and Health Committees

Special safety and health committees may be formed on an ad hoc or continuing basis in accordance with 29 CFR 1960.38 to assist the NASA Center or Component Facility safety and health officials in dealing with particular programs, projects, geographical areas, or special operations. Committee members chosen for this assignment must receive safety or health training as required (Requirement 22066). NASA Centers or Component Facilities are also encouraged to form supervisor-and employee-level safety committees to assist in the implementation of the safety and health programs. Written minutes of each committee meeting shall be maintained and distributed per 29 CFR 1960.37 (Requirement 31589).

## 5.5 Field Federal Safety and Health Councils

Field Federal safety and health councils are chartered by the Secretary of Labor and are located throughout the Nation. They encompass all Federal agencies in a particular geographic location. The basic objective of field councils is to facilitate the exchange of ideas and information to assist Federal agencies in reducing the incidence, severity, and cost of occupational accidents, injuries, and illnesses. They often provide consolidated training opportunities and provide for an exchange of expertise between safety and health professionals from the participating agencies. NASA Centers or Component Facilities are encouraged to partake.

# **CHAPTER 6. Safety and Health Training**

#### 6.1 Goal

NASA is committed to the development and implementation of a comprehensive program of occupational safety and health training and instruction. The purpose is to assure the highest practical skill levels for safety and health professionals, safe work habits for employees involved in controlled hazardous operations, and sufficient information to enable management officials and supervisors to recognize their responsibilities under the Occupational Safety and Health Act and the NASA safety and health programs.

## 6.2 Center Director Responsibility

The Center Director has the ultimate responsibility to assure that adequate training is provided to personnel in accordance with Federal and NASA requirements (Requirement 22067). In performance of this responsibility, the Center Director shall:

- 6.2.1 Identify safety and health training needs (Requirement 22142).
- 6.2.2 Budget for safety and health training requirements (Requirement 22143).
- 6.2.3 Develop safety and health training courses (Requirement 22144).
- 6.2.4 Maintain training records to reflect employee safety and health training (Requirement 22145).

### **6.3 DASHO Responsibility**

The DASHO shall assure that safety and health officials are designated at each appropriate level with sufficient authority and responsibility to plan for and assure funds for safety and health staff, equipment, materials, and training required to ensure implementation of an effective occupational safety and health program (Requirement 22068).

## 6.4 Agency Safety and Health Managers

The Office of Safety and Mission Assurance, Safety and Assurance Requirements Division, and the Office of the Chief Health and Medical Officer are responsible for overseeing and advocating the safety and health training effort per their respective policy documents, to include:

- 6.4.1 Establishing safety and health training policies and assessing Center or Component Facility performance with OSHA and NASA requirements (Requirement 31590).
- 6.4.2 Advocating additional training budget needs with the DASHO and the NASA Operations Management Council based on Center or Component Facility performance evaluations, and/or budget communications (Requirement 31591).
- 6.4.3 Sponsoring training course development and maintaining a catalog of available training courses to augment Center or Component Facility training programs (Requirement 31592).
- 6.4.4 Maintaining liaisons with other government and industry training organizations for the purposes of cross fertilization and lessons learned (Requirement 31593).

## 6.5 Personnel to be Trained

Appropriate instruction and job-related safety and health training are required for the following employees:

- 6.5.1 Top management officials including program/project managers (Requirement 31594).
- 6.5.2 Supervisors (Requirement 31595).
- 6.5.3 Safety and health professionals (Requirement 31596).

- 6.5.4 Collateral duty safety and health personnel and safety and health committee members (Requirement 31597).
- 6.5.5 Employees and employee representatives (Requirement 31598).
- **6.6 Training Course Content**

The training program should be structured so as to ensure that the following information be provided to civil servants, as required, for their specific jobs as reflected in paragraph 6.3:

- 6.6.1 Essential features of the Occupational Safety and Health Act (Requirement 31599).
- 6.6.2 Content of Executive Order No. 12196 (Requirement 31600).
- 6.6.3 The requirements of 29 CFR Part 1960, "Basic Program Elements for Federal Employee Occupational Safety and Health Programs," and related matters (Requirement 31601).
- 6.6.4 NASA's occupational safety and health policies and program requirements (Requirement 31602).
- 6.6.5 Specific job-related information such as:
- 6.6.5.1 Hazards of the job task (Requirement 31604).
- 6.6.5.2 Safe and healthful work practices. (Requirement 31605).
- 6.6.5.3 Hazards of the work environment (Requirement 31606).
- 6.6.5.4 Necessity for and proper use and care of personal protective equipment (Requirement 31607).
- 6.6.5.5 Pertinent emergency procedures (Requirement 31608).
- 6.6.5.6 Methods for reporting of mishaps, occupational injuries, illnesses, and hazardous conditions (Requirement 31609).
- 6.6.5.7 Safety and health standards applicable to the work environment (Requirement 31610).

# **CHAPTER 7. Recordkeeping and Reporting Requirements**

#### 7.1 Record Retention

All safety and health documents and records will be maintained in accordance with NPD 1440.6, "NASA Records Management," and NPR 1441.1, "NASA Records Retention Schedules."

## 7.2 Reporting

NASA Centers or Component Facilities will maintain required information for the following:

7.2.1 Annual Summary - Occupational Injuries/Illnesses (OSHA Form 300) summarizing the calendar year information will be forwarded to the DASHO or their designee within 30 days following the end of the calendar year (Requirement 22072). A summary of all open abatement plans and a listing of those closed during the reporting period will also be provided to the DASHO or designee as part of the input to the annual report.

7.2.2 NASA's Annual Report to the Secretary of Labor. The format for this report will be forwarded to each Center as soon as it is received from OSHA/DOL. NASA Centers and certain Headquarters offices will complete and return the information to the DASHO (or designee). Preparation of the Agencywide report (NASA Report Control No. 10-SMIS-00609) will be a joint responsibility of the Safety and Assurance Requirements Division and the Office of the Chief Health and Medical Officer (Requirement 22073).

# **CHAPTER 8. Evaluation of Occupational Safety and Health Programs**

## 8.1 Program Oversight

- 8.1.1 Institutional/Facility/Operational Safety Audits and Biennial Occupational Health Audits of NASA Center or Component Facility safety and health programs by responsible Headquarters offices will be conducted on a frequency stipulated in their respective policy documents. These audits should provide some basis for input into the NASA self-evaluation review process (see paragraph 8.2 of this NPR).
- 8.1.2 Surveys will include qualitative assessments of the extent to which the Center or Component Facility safety and health programs are:
- 8.1.2.1 Compliant with NASA policy and procedures (Requirement 31611).
- 8.1.2.2 Compliant with Executive Order 12196 and provisions of 29 CFR Part 1960 (Requirement 31612).
- 8.1.2.3 Implemented effectively by the Center or Component Facility (Requirement 31613).
- 8.1.2.4 Consistent with recognized good practice (Requirement 31615).

#### 8.2 Center Self-Evaluations

Centers or Component Facilities shall evaluate their safety and health programs and submit the reports in conjunction with the annual OSHA report (see paragraph 7.2.1 of this NPR) (Requirement 22077). Centers or Component Facilities shall use the OSHA baseline questionnaire, which is based on 29 CFR 1960 requirements, to perform the self evaluations (Requirement 31615).

## 8.3 Program Evaluation by OSHA/DOL

OSHA is directed by Executive Order 12196 to conduct evaluations of all Federal agency safety and health programs. Any such procedure will be coordinated with the Agency DASHO (or designee) who, in turn, will notify other offices and NASA Centers or Component Facilities, included in the OSHA evaluation.

Appendix A. NASA Form 1390-Notice of Unsafe or Unhealthful Condition In PDF Format.

Appendix B. NASA Form 1584-Safety and Health Hazard Abatement Plan In PDF Format.